

U. S. DEPARTMENT OF COMMERCE  
Environmental Science Services Administration  
In cooperation with  
Cotton Economic Research and  
Bureau of Business Research of  
The University of Texas at Austin

CLIMATOGRAPHY OF THE UNITED STATES NO. 20-41

LATITUDE 30° 22' N  
LONGITUDE 103° 39' W  
ELEV. (GROUND) 4433 ft.

CLIMATOLOGICAL SUMMARY

Revised May 1968

STATION ALPINE, TEXAS

MEANS AND EXTREMES FOR PERIOD 1938-1967

Month	Temperature (°F)							* Mean degree days	Precipitation Totals (Inches)							Mean number of days				Month						
	Means			Extremes			Mean	Greatest daily	Year	Snow, Sleet				Precip. 10 inch or more	Temperatures		Max.	Min.								
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest				Mean	Maximum monthly	Year	Greatest Depth	Year	90° and above	32° and below	32° and below	0° and below								
(a)	29	29	29	29	1963	0	1948	608	0.85	1.30	1946	3.5	26.3	1946	4	1966	2	0	*	17	0	Jan				
Jan	58.2	33.7	46.0	81	1940	3	1956	491	0.36	1.31	1957	1.3	5.9	1963	4	1965	1	0	1	14	0	Feb				
Feb	62.8	36.8	49.8	85	1946	10	1948	337	0.26	0.75	1967	0.1	1.8	1947	3	1965	1	*	*	8	0	Mar				
Mar	69.4	41.5	55.5	91	1946	21	1939	119	0.47	1.18	1941	0.1	1.7	1939	0		1	2	0	1	0	Apr				
Apr	77.4	49.4	63.4	97	1963	21	1939	26	1.24	1.54	1944+	T	T	1953	0		3	9	0	*	0	May				
May	84.7	56.9	70.8	101	1951	32	1967	26	1.24	1.54	1944+	T	T	1953	0		4	18	0	0	0	Jun				
Jun	90.1	63.9	77.0	105	1942	38	1964	2	2.56	2.61	1958	0	0		0		5	18	0	0	0	Jul				
Jul	89.2	65.2	77.2	104	1944	54	1961	*	2.73	2.27	1950	0	0		0		5	15	0	0	0	Aug				
Aug	88.3	64.4	76.4	103	1951	49	1960	2	2.43	2.90	1944	0	0		0		3	7	0	0	0	Sep				
Sep	83.8	59.4	72.6	99	1948	36	1945	15	1.99	2.43	1959	0	0		0		3	*	0	0	0	Oct				
Oct	77.3	51.5	64.3	93	1965+	26	1967	126	1.36	1.94	1966	T	T	1949	0		3	*	0	1	0	Nov				
Nov	66.7	41.4	54.1	85	1955+	8	1938	341	0.41	1.00	1955	0.3	3.5	1955	T	1957	1	0	*	6	0	Dec				
Dec	60.8	35.8	48.3	81	1954	1	1953	559	0.55	1.13	1942	0.9	6.0	1946	6	1960	2	0	1	16	0					
Year	75.7	50.0	62.9	105	June	1942	0	Jan.	2626	15.21	2.90	Aug.	1944	6.2	26.3	Jan.	1946	6	Dec.	1960	31	69	2	63	0	Year

(a) Average length of record, years.

T Trace, an amount too small to measure.

\*\* Base 65°F

+ Also on earlier dates, months, or years.

\* Less than one half.

Alpine is the county seat of Brewster County, a wild mountainous area of 5,935 square miles and equivalent in size to the states of Connecticut and Rhode Island combined. Its climate and location have made Alpine a popular vacation city. Visitors may enjoy mountain climbing, horseback riding, hiking, golf, swimming, camping and rock collecting. There are many spectacular drives in the surrounding mountains. In season, hunters take mule deer, pronghorn antelope and upland game birds. Alpine is a gateway to Big Bend National Park which lies approximately 80 miles to the south via State Highway 118. Sul Ross State College is located at Alpine.

Brewster County, largest in Texas, is located in the Big Bend of the Rio Grande. Rugged, spectacular mountains rise to 7835 feet. Ninety-seven percent of agricultural income is from livestock. There is a limited mineral output, chiefly clays. Farming operators produce feed grains, fruits and nuts.

Alpine, as the name suggests, has a mountain type climate. More specifically, it may be described as a cool-temperate, humid climate with warm summers. Fifty-one percent of the mean annual total precipitation falls during the three summer months. Mean annual rainfall is almost double the normal rainfall in the area west of the mountains. Winters are dry, but more humid than the surrounding lowlands.

Snow falls occasionally during the winter months, but most often it is light and remains on the ground a short time. The mean monthly snowfall data are biased by rare exceptionally heavy snows so that this statistic is a poor estimate of expected snowfall. Sometimes the total snowfall for the month occurs on a single day.

Alpine is protected partly from the cold air masses that move southward across the plains in winter. Many of these turn southeastward before reaching the Alpine area. Surges of cold air from

the mountain states bring rapid drops in daytime temperatures from late fall to early spring, but these cold spells are of rather short duration, rarely lasting more than 36 to 48 hours. Minimum temperatures of 32°F or below occur about 50 percent of the time in winter. The lowest temperature of record at Alpine (since 1930) is -2°F, and occurred on February 8, 1933.

The combination of low relative humidity and high elevation results in a very pleasant summer climate at Alpine. While daytime temperatures may go above 100°F occasionally, only in June is the mean daily maxima above 90°F. Radiational cooling after sundown lowers temperatures rapidly so that daily minima are in the middle and low sixties. Since 1930, the highest temperature of record is 106°F having occurred on June 17, 1932, and on July 19 and 20, 1936.

Sunshine is abundant the year round, averaging about 75 percent of the total possible. Infrequent periods of cloudy weather are confined mostly to the winter months.

Relative humidity is low, averaging about 50 percent annually. Monthly values range from 50 to 60 percent in the winter months to between 30 and 40 percent in April.

The Davis Mountains to the north of Alpine block off winds from this direction so that the prevailing direction is westerly from November through May. A southeasterly flow prevails throughout the summer and early fall months.

The growing season (freeze free period) at Alpine averages 223 days. The mean dates of the last 32°F temperature in the spring and the first in the fall are March 31 and November 9, respectively. Low temperatures are highly sensitive to topography so that significant departures from these mean values may exist within the Alpine area. The mean annual lake evaporation is 68 inches.

WALLING, TEXAS

### Average Temperature (°F)

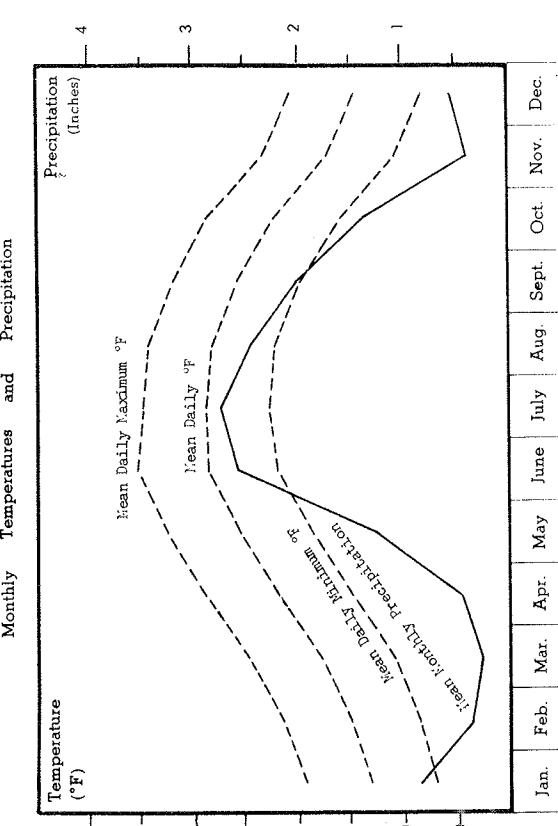
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann <sup>1</sup>
1938	47.1	54.8	58.6	61.4	70.6	77.2	74.2	75.6	70.2	66.6	53.2	48.6	63.2
1939	47.6	-	58.6	63.2	72.5	78.8	76.4	73.4	73.4	65.2	48.8	50.9	-
1940	47.5	49.8	57.9	62.5	69.8	73.4	77.2	71.4	72.1	65.0	51.6	62.2	-
1941	47.2	51.0	61.8	68.0	70.4	73.0	72.0	75.1	70.4	66.0	51.9	61.9	-
1942	48.2	54.0	61.2	67.7	72.0	78.4	77.9	74.0	67.8	62.6	58.0	51.2	-
1943	47.4	54.2	56.6	67.7	72.1	75.7	77.4	81.5	70.4	63.0	52.2	45.6	-
1944	45.6	52.2	56.4	61.8	70.6	76.2	78.8	76.6	68.7	63.6	53.8	55.4	-
1945	48.6	52.6	55.6	61.8	73.2	76.9	74.4	76.5	71.5	63.5	56.6	48.4	-
1946	40.7	51.4	57.2	66.4	69.4	76.2	77.8	77.8	71.4	67.5	52.9	48.9	-
1947	39.4	47.3	55.6	61.2	70.9	78.0	78.2	75.3	74.4	65.4	53.3	63.8	-
1948	43.4	50.8	54.5	69.2	72.0	79.4	78.7	79.1	72.6	62.7	52.8	53.3	-
1949	38.3	51.8	58.8	59.0	73.0	77.1	78.0	75.5	71.9	62.7	58.9	62.9	-
1950	51.6	-	54.8	66.8	71.8	74.4	76.3	77.0	72.5	67.8	57.0	65.4	-
1951	-	50.0	55.2	62.3	72.4	79.6	80.5	80.7	74.2	66.9	55.1	61.6	-
1952	54.3	50.0	52.7	61.9	70.3	76.7	76.0	82.0	72.5	65.0	52.0	67.9	-
1953	49.9	60.6	63.6	67.6	70.1	82.3	80.1	77.6	74.2	65.1	54.5	64.4	-
1954	50.8	54.0	67.3	70.3	78.1	79.4	77.1	75.8	66.7	55.7	50.9	65.4	-
1955	44.8	48.8	57.9	66.7	71.0	77.2	76.3	76.6	74.3	66.7	55.9	52.1	-
1956	50.9	47.9	58.4	61.9	75.0	79.4	79.3	78.1	74.2	68.7	52.9	64.6	-
1957	50.0	52.0	57.9	61.4	68.1	79.9	80.5	78.9	72.3	64.4	49.9	63.9	-
1958	42.5	50.4	55.9	61.4	62.4	70.2	79.3	79.9	78.7	-	52.6	45.8	-
1959	45.5	48.2	51.3	59.0	69.9	76.5	73.8	76.1	71.7	62.2	47.7	47.6	-
1960	46.6	42.8	52.1	62.4	67.5	73.7	74.1	69.9	63.9	53.0	39.7	60.1	-
1961	38.7	47.4	50.7	62.0	71.0	73.5	72.7	74.5	70.5	61.3	-	-	-
1962	-	-	52.1	63.5	72.5	75.5	77.1	77.0	71.7	-	-	-	-
1963	41.3	48.2	56.6	63.0	70.8	75.0	77.6	78.1	-	-	-	-	-
1964	42.5	53.3	49.5	63.0	70.8	75.0	77.6	78.1	71.7	62.5	55.7	50.6	-
1965	49.3	44.7	49.5	65.9	69.2	73.9	76.6	74.0	71.7	69.7	58.7	45.2	-
1966	41.2	43.4	55.6	62.2	68.9	75.6	78.8	73.5	74.5	59.1	56.3	60.8	-
1967	45.3	49.1	60.2	67.0	68.1	75.3	75.2	71.2	66.3	61.4	54.2	62.4	-

### Total Precipitation (Inches)

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Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1938	0.76	0.21	0.08	0.42	0.46	2.65	6.06	0.67	1.06	0.90	0.31	13.58	
1939	1.96	T	0.24	0.21	0.85	2.32	3.32	1.99	0.28	0.16	1.59	0.68	
1940	0.84	0.61	0.10	0.13	3.83	3.00	1.76	3.49	0.16	2.30	1.03	17.97	
1941	1.27	0.45	0.71	3.60	3.26	7.19	2.71	2.69	5.99	4.24	0.87	33.09	
1942	0.26	0.12	T	0.18	1.34	2.01	2.05	7.20	1.06	1.01	0.15	16.77	
1943	0.65	T	0.19	0.01	0.87	3.12	2.05	0.50	2.95	0.45	0.98	1.18	
1944	0.64	0.93	0	1.78	5.08	1.59	5.10	4.91	0.18	0.90	1.73	23.40	
1945	0.16	0.01	1.49	0.20	0.49	4.70	2.04	0.54	4.92	0	T	14.65	
1946	0.16	0.01	0.32	0.44	3.25	0.33	1.27	7.05	2.52	0.18	1.06	19.72	
1947	1.58	0.28	0.99	0.04	2.59	4.24	4.54	2.30	1.89	0.21	0.84	18.72	
1948	0.45	0.13	0.02	0.46	1.41	2.70	3.20	1.13	1.04	0.60	0.02	12.36	
1949	1.46	0.24	0.07	1.52	1.10	2.85	1.28	1.65	4.29	2.79	0	0.32	
1950	0.52	0.04	0.18	0.08	0.55	4.64	4.36	3.28	2.03	1.01	0	T	
1951	0.10	0.38	0.90	0.20	1.91	2.37	2.73	1.12	0.27	0.03	0.11	11.42	
1952	0.96	T	0.33	0.23	1.13	1.09	1.45	4.72	0.09	0.12	1.15	0.72	
1953	T	0.33	0.23	0.13	1.08	1.29	2.77	1.57	0.05	0.66	T	8.38	
1954	0.30	0.06	0.13	1.65	0.48	3.46	0.39	4.15	0.66	0.30	T	13.22	
1955	1.22	T	0.21	0.37	2.15	2.71	2.75	1.95	1.82	0.53	1.03	0.23	
1956	0.53	0.32	0.06	0.71	0.92	1.35	2.94	0.20	0.59	1.29	0.07	0.19	
1957	0.47	3.07	0.01	0.12	1.19	0.68	2.69	1.60	1.27	0.01	0.10	9.15	
1958	1.85	T	0.85	0.12	1.24	4.05	3.87	1.93	4.21	2.52	0.45	22.98	
1959	0.01	C.66	T	0.66	0.49	2.29	0.06	1.06	3.55	0.50	0.51	11.20	
1960	1.50	0.00	0.50	0.17	0.44	1.58	5.73	2.31	0.03	1.85	0.60	2.26	
1961	1.22	0.27	0.12	0.24	1.82	5.44	3.89	3.45	1.08	1.51	0.34	19.49	
1962	0.68	0.28	0.13	0.07	0.44	1.36	2.33	1.57	2.04	1.11	0.65	11.54	
1963	0.03	0.03	0.28	T	0.72	2.86	1.32	1.94	-	-	-	-	
1964	0.14	T	0.44	0.02	0.84	2.40	1.09	1.17	0.21	0.05	0.53	7.98	
1965	1.27	0.15	0.05	0.47	1.98	1.49	1.97	0.56	0	0.39	0.47	9.16	
1966	0.53	0.04	0.17	0.54	0.03	0.69	6.69	4.27	3.87	0	0.01	19.55	
1967	0.66	C.01	0.75	0	0.01	5.26	1.72	2.90	0.20	0.30	0.59	14.76	

T - Trace



Rainfall records began at Alpine in March 1900, but ended in August of the same year. Observations were begun again at the school house on April 1, 1911, with Mr. J. Frank Hobble as the official observer. Observations were terminated February 28, 1917. The station was re-established near the college, and rainfall and temperature observations began on March 22, 1929. The station was moved to the Sul Ross State College campus April 1, 1957, and to Radio Station KULF in 1959. Mr. William H. Hudgins was appointed cooperative observer on January 19, 1962 and the station was moved to his residence, 0.5 mile north of the post office. All station locations, beginning in 1911, have been within a distance of one mile of the post office. Alpine is a 2nd Order Airway weather station. Six-hourly synoptic weather reports are transmitted four times daily on a national weather circuit.

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